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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,990	06/22/2006	Naoki Tomoguchi	062622	7351

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EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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04/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,990	Applicant(s) TOMOGUCHI ET AL.	
	Examiner SOPHIE HON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-11 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-4,6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/7/09, 2/9/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Request for Reconsideration

Withdrawn Rejections

1. The 35 U.S.C. 103(a) rejections of claims 1, 3-4, 6-11, over Saiki in view of Brill as the primary combination of references, are withdrawn due to Applicant's arguments dated 02/09/09.

New Rejections

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 3-4, 6, 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saiki (US 2002/0075428) in view of Chen (US 2004/0167260 A1) and Deyrup (US 3,318,856).

Regarding claims 1, 3-4, Saiki teaches an adhesive containing a polyvinyl alcohol-based resin having an acetoacetyl group and a crosslinking agent which has to be water soluble ([0035]) since the adhesive is an aqueous solution ([0042]). Saiki teaches that an acid is added to the aqueous solution as the crosslinking agent for the polyvinyl alcohol-based resin ([0035]), but fails to disclose the pH of the aqueous solution, let alone one that is in the specific range of from 2.2 to 4.3.

However, Saiki teaches that the water soluble cross linking agent can be a carboxylic acid (oxalic acid, [0042]).

Chen teaches that the pH of an aqueous solution of polyvinyl alcohol-based resin and a carboxylic acid is preferably within a range of about 1.5 to about 4.5 [0025]), which contains the claimed range of 2.2 to 4.3, for the purpose of preventing formation of unwanted carboxylic acid salt, and hence ensuring that all the carboxylic acid will be available to form the desired ester with the polyvinyl alcohol-based resin as part of the cross linking reaction ([0025]).

Deyrup teaches that the pH of an aqueous solution of polyvinyl alcohol-based resin and a carboxylic acid (oxalic acid, column 3, lines 65-75) is preferably at least 3 for the purpose of preventing acid corrosion of industrial process equipment commonly used to process the solutions (column 4, lines 5-8).

Therefore, since Saiki is silent regarding the acidity and hence pH of the aqueous solution, it would have been necessary and hence obvious to have looked to the prior art for suitable values. As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the aqueous adhesive solution of Saiki with a pH that is in the range of from 2.2 to 4.3, in order to prolong the life of the industrial process equipment used to process the solution, as taught by Deyrup, and to obtain the desired cross linking of the polyvinyl alcohol-based resin during the cross linking reaction, as taught by Chen.

In addition, Saiki teaches that the adhesive is used for forming an adhesive layer (layer of adhesive made of a vinyl alcohol-based polymer, [0031]) in a polarizing plate in which a polarizer and a transparent protective film are adhering with each other via the adhesive layer, wherein the polarizer is a polyvinyl alcohol-based polarizer (polarizing

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film, [0031]). It is noted that these features are intended use ones, and hence are not positively recited.

Regarding claim 6, Saiki teaches a polarizing plate comprising a polarizer and a transparent protective film which is provided on at least one surface of the polarizer via the adhesive layer (adhered to one side or both sides, [0031]) formed with the adhesive for polarizing plates described above.

Regarding claim 8, Saiki teaches an optical film comprising at least one polarizing plate (polarizer used as an optical member that is laminated onto another optical layer, [0043]), wherein the polarizing plate is the one described above.

Regarding claim 9, Saiki teaches an image display comprising the polarizing plate described above (liquid crystal display, [0065]).

Regarding claim 10, Saiki teaches that the acid can be an organic acid (oxalic acid, [0042]).

Regarding claim 11, Saiki fails to teach that the acid is an acetic acid.

However, Saiki teaches that the acid can be a carboxylic acid such as oxalic acid ([0042], or the like, [0035]).

Chen teaches that acetic acid can be used instead of oxalic acid as the carboxylic acid ([0034]), for the same purpose of providing the desired cross linking ([0025]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used acetic acid in lieu of oxalic acid as the acid

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cross linker of the polyvinyl alcohol-based resin in the adhesive of Saiki, in order to obtain the desired cross linking, as taught by Chen.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saiki in view of Chen as applied to claims 1, 3-4, 6, 8-11 above, and further in view of Sugino (US 2003/0137732).

Saiki, as modified by Chen, teaches the polyvinyl alcohol-based adhesive layer for polarizing plates described above. Saiki is silent regarding the thickness of the adhesive layer.

However, Sugino teaches that a polyvinyl alcohol-based adhesive layer for a polarizing plate (polarizer can be bonded to the transparent protective layer, PVA-based adhesive, [0076], polarizing plate, [0077]), more preferably has a thickness from 20 nm to 100 nm ([0076]), which is within the claimed range of from 30 to 300 nm, for the purpose of providing the desired balance of adhesion and minimal optical interference to the polarizing plate.

Therefore, since Saiki is silent regarding the thickness of the adhesive layer, it would have been necessary and hence obvious to have looked to the prior art for suitable values. As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the polyvinyl alcohol-based adhesive layer adhering the polarizer and the transparent protective film of Saiki, with a thickness that is within the range of from 30 to 300 nm taught by Sugino, in order to obtain the desired balance of adhesion and minimal optical interference to the polarizing plate.

Response to Arguments

4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample, can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sophie Hon/

Sow-Fun Hon

Examiner, Art Unit 1794

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794